means on the frame, the mounting means vibrationally isolating the first and second clamping means from the frame, means to move at least one of the first and second clamping means to apply in operation a low cycle load on the specimen, means to measure the low cycle load, electrical insulating means to electrically insulate the frame from the specimen, vibration excitation means acoustically coupled to one of the first and second clamping means to apply in operation a high cycle load on the specimen, means to measure the high cycle load, detector means to detect vibration of the specimen and to produce an electrical signal, control means arranged to receive the electrical signal, the control means determining the resonant frequency of the specimen from the electrical signal and sending a signal to the vibration excitation means to maintain the high cycle load at the resonant frequency of the specimen, probes being provided on the specimen in operation and being arranged to produce a second electrical signal, means to supply an electrical current through the specimen, means to determine crack growth rate arranged to receive the second electrical signal and to determine the rate of crack growth in the specimen and/or determining the life of the specimen to failure.

Please delete the paragraph at p. 14, lines 1-27 and insert the following:

In a further method of operation to fatigue test specimen 12, the main control unit 42 also analyses the electrical signals to determine the amplitude of vibration of the specimen 12. The main control unit 42 then sends further signals to the control unit 50 and/or the waveform generator 54 to maintain the frequency of vibration of the specimen 12 at its resonant frequency to maintain the amplitude of vibration of the specimen 12 at a predetermined amplitude until the specimen 12 fractures or fails completely. The main control unit 42 determines the amount of energy required to vibrate the specimen 12 at the predetermined amplitude of vibration at the resonant frequency, particularly in a bending mode vibration. It is possible to provide coatings of different damping materials or provide different damping treatments on identical specimens 12 to determine which damping material or damping treatment provides the most damping and/or

to rank the damping materials and damping treatments in order of increasing damping coefficient. This is achieved by comparing the amount of energy required to vibrate the specimens 12 at the predetermined amplitude of vibration at the resonant frequency. This is particularly beneficial for determining suitable damping materials for fan blades, compressor blades or turbine blades. Also by testing this specimens 12 until they fail it is possible to determine the effect of the damping coating, or damping treatment, on the fatigue strength or fatigue life of the specimen.

Please delete the paragraph at p. 14 beginning at line 28 and bridging over to p. 15 line 3 and insert the following:

The low cycle load applied may be a tensile load or a compressive load. The high cycle load may be a torsion load or a bending load. The leaf springs of the mounting means may be redesigned to have low torsional stiffness to allow testing of the torsional modes of the specimen. A torsional load is applied by adjusting the position of the shaker. In this case the shaker is mounted off axis to apply a load to the second clamping means and a second shaker may be used to cancel the direct load applied to the second clamping means.

IN THE CLAIMS:

Please cancel claims 4, 6, 27 and 29.

Please amend claim 1, 14 and 24 as follows:

(amended) 1. A device for fatigue testing of materials comprising a frame, first and second clamping means for holding a specimen to be tested, mounting means to mount the first and second clamping means on the frame, the mounting means vibrationally isolating the first and second clamping means from the frame, means to move at least one of the first and second clamping means to apply in use a low cycle load on the specimen in an axial direction, means to measure the low cycle load, vibration excitation means acoustically coupled to one of the first and second clamping means to apply in use a high cycle load on the specimen, means to measure the high cycle load, detector means to detect